

REPORT OF THE CITY ARCHITECT AND PLANNING OFFICER

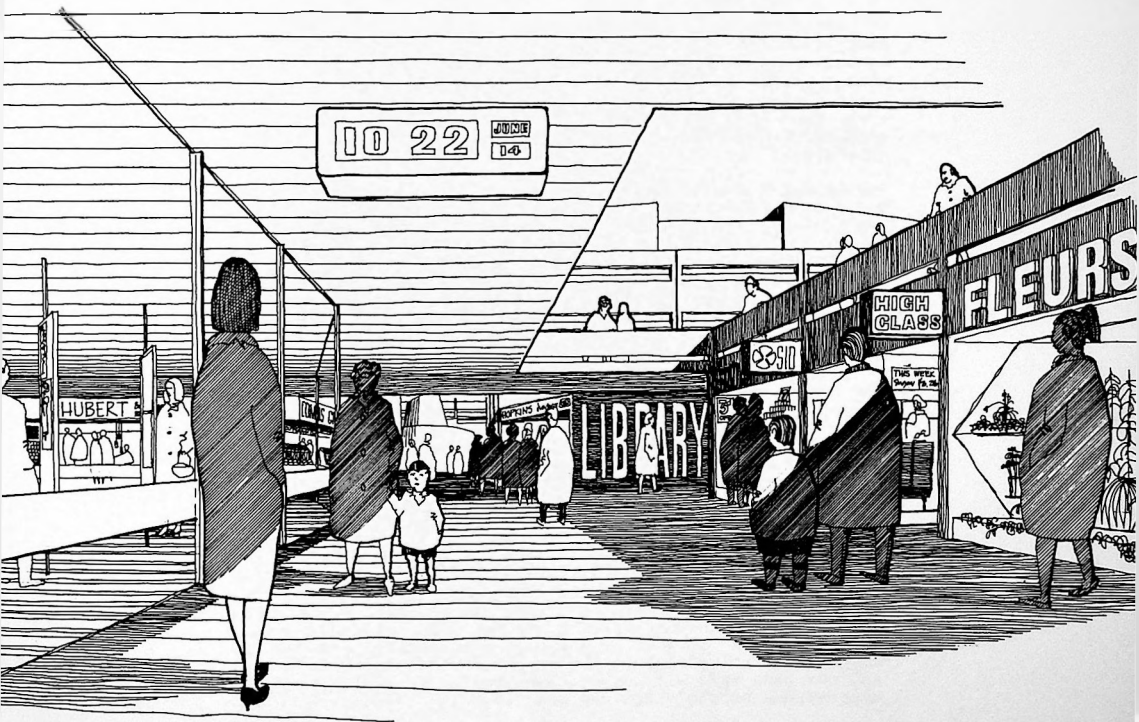
LION YARD CAMBRIDGE

JUNE 1965

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View northwards up shopping arcade

Purpose of report

This report illustrates a preliminary scheme which has been prepared to explore the potentialities of the Lion Yard area. Its production in a broad generalised way has enabled the design potential of the whole area to be kept fluid. The fact that detailed sketch plans have not so far been prepared for any of the buildings means that it is still possible to retain a great deal of fluidity of conception.

At the same time reasonably precise estimates have been made of the amount of space needed for each activity, and of the cost of structure, finishes and services. It has been possible to estimate both the amount of different building uses which can reasonably be accommodated in the area; what they would cost to erect; what their operating economics would be and what the total cost would be to the ratepayers.

The scheme illustrated in this tentative form represents the result of some eighteen months work in the course of which ideas have gradually developed. The last six months of the period have been spent in close consultation with the City Treasurer, the Council's Estates Adviser and the Council's Quantity Surveyor. The aim has been to achieve the maximum economy of layout, the maximum commercial attractiveness and the maximum architectural potential. Improvements in all these aspects of the scheme have been effected.

The scheme as it now stands represents an additional rate burden of 6½d. of which about a third represents the Concert Hall, a third the Central Library and a third the remainder of the scheme. This additional cost may be expected to decline over the course of time and to turn eventually into a surplus. It may well be accepted, therefore, that it represents a reasonable price to pay for two major public buildings and the redevelopment of a large part of the centre.

Publication of the scheme will enable full public discussion to take place at a stage early enough for the opinions expressed to have a formative effect on the scheme. Very many people in and out of Cambridge are deeply interested in its future. It will be possible for their constructive suggestions to be taken into account as the scheme develops and the Lion Yard will come to represent the wishes and aspirations of all those who wish Cambridge well.

GORDON LOGIE



Location Diagram

The area of the Lion Yard is shown hatched



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G STEPS IN IMPLEMENTING THE SCHEME

The decision to redevelop the area as a unified whole : the choice of building elements to be included in the redevelopment : the preparation of an outline layout of the whole area : building operations : financial basis of proposals

H CONCLUSION

Acknowledgements

A . Introduction

- A 1 The problem of the future development of the centre of Cambridge can only be solved satisfactorily in terms of a "Buchanan environment" with planning and transportation nicely balanced to achieve good living and working conditions.
- A 2 In order to achieve this it will be necessary to assess the future growth of demand for central area buildings such as shops, administrative, commercial and professional offices, recreational and cultural and other buildings, housing, and those University buildings which are best placed in the central area.
- A 3 Having done this it will be necessary to decide where, within the central area, these buildings can best be placed, taking into account the architectural, functional and transportation problems involved.
- A.4 At a comparatively early stage in the investigation it became clear that to deal with the growing problems of the central area it would be necessary to look beyond the restricted area bounded by "the ring of colleges". This would enable the growth of activities to be planned for a long period ahead.
- A 5 The achievement of a "Buchanan environment" over the whole future central area, with large areas reserved for pedestrians only, made it necessary to plan for the total exclusion of through traffic and the careful canalisation of motor cars and goods vehicles bound for the centre. It became necessary to consider a much wider part of the centre of Cambridge as the basis for future studies, and the Minister has now suggested the area within the dotted line.
- A 6 Within this wider central area it will be necessary to make studies into each section of development to determine how much floor space can be provided in an architecturally acceptable form and whether the amount of traffic of people and goods generated by this floor space can be dealt with by a future transportation system which is likely to be acceptable in terms of cost and amenity.
- A 7 Much of the central area is unlikely to change materially from its present use or architectural form and this will simplify the early stages of the study. Certain areas, however, are likely to undergo extensive redevelopment, some of it within the next decade, and these must be studied in detail. It will be clear that as we are considering a future Cambridge as it might be when car ownership has grown to its peak, we must also make long-term assessments of building need. We must now look a great deal further than the twenty years previously envisaged in development plans.
- A 8 Chief among these areas of change where extensive redevelopment must be expected is the Lion Yard. Others are the King Street area where the three colleges of Christ's, Jesus and Sidney Sussex are working on plans for comprehensive redevelopment (mainly for residential use with some shopping

and a major car park); the science area and in particular the New Museum site and Addenbrookes Hospital where extensive redevelopment for University teaching and research is likely; and the area bounded by Newmarket Road, East Road, Parker Street and Emmanuel Road where the Minister has said that an extension for central area shopping should be planned as part of a comprehensive scheme for the whole area. The amount of additional shopping space likely to be needed in addition to that being provided in the Lion Yard is at present being investigated. Any plans must provide for the future long term growth of central area uses.

- A 9 Although these five are the principal areas where extensive redevelopment is likely, there are others such as behind the Pitt Press and between Bridge Street and Jesus Green which may change very appreciably in the foreseeable future. Even in the colleges there may be substantial developments, as the King's/St. Catharine proposal has shown. All these positions will need careful evaluation in physical and traffic terms.
- A10 When these studies have been completed, or at least carried to the point when it is possible to reach reliable conclusions on the amount of traffic they are ultimately likely to generate, and when similar (but simpler) studies have been completed for the rest of Cambridge, it will be possible to prepare proposals for a primary road network in the context of a transportation plan capable of serving Cambridge of the future.
- A11 To do this will require the full technique of modern transportation planning including additional traffic surveys designed to make clear the present pattern of travel habits and the way they are linked to land use. It may also be necessary to construct a "traffic and land use model". This would not be a model in the ordinary sense of a small representation of something but a mathematical device similar in kind to the "economic models" at present being used to predict our economic future. If this is found to be unduly cumbersome, it may be possible to devise some simpler method of predicting the future in terms of probable changes in people's habits and the growth and change in population, land use and transportation.
- A12 Technically this is likely to be the most complex part of the whole operation. A good start has however now been made with the County and University working with the traffic consultants R. Travers Morgan and Partners.
- A13 The very real complexities of traffic survey and transportation planning are now well understood and there is no technical difficulty in commencing this work forthwith in Cambridge. Many towns have in the last year or two embarked on such studies with the financial support of the Ministry of Transport. Delay in this side of the work will hold up the whole of the future planning of Cambridge and could even throw doubt on the validity of a definitive plan for the Lion Yard and the new extension to the central area.
- A14 In spite of the difficulties in starting this work sooner we considered that there was no need to hold up preliminary studies on the Lion Yard on the grounds that these cannot at present be related to an overall bulk of buildings and trans-

portation plan for the whole of the central area. Sufficient data was available for tentative conclusions to be reached and suggestions for a combined network of roads and carparks serving the central area are at present being discussed with the other members of the team. Before any final conclusions are reached, however, it will be necessary to test this network using data derived from the transportation survey.

- A15 In addition, it will be necessary to make a preliminary examination of the other major areas of change, both in the central area itself and in the twilight areas adjoining, and also to attempt some overall assessment of the trends of growth in terms of people, their activities and the amount of floor space that will be needed to house them.
- A16 With the staff at present available it may be some considerable time before these studies can be completed. We have, however, done enough work to get the 'feel' of the problem and we are confident that the type and amount of land use we have indicated in the Lion Yard, and those that are being contemplated in the other major areas of change, could be accommodated in an overall plan which will prove to be acceptable in human, architectural, planning and transportation terms.
- A17 It is likely that this overall plan would include a unidirectional loop road feeding the southern part of the central area. Associated with this and other loops and sited as near as possible to the centres of demand would be a system of car parks built one after the other as demand grew. Guidance on the total number of car spaces needed would be given by the transportation studies. Present indications are that it might ultimately rise to as many as 6-7,000 car spaces. Possible positions for these future car parks are being considered as part of the overall transportation proposals.
- A18 The advantage of producing this preliminary report on the Lion Yard in advance of a general report on the central area is that it will enable extensive discussions on the form and feasibility of the proposals to proceed. We can only hope that by the time all the intricate problems of developing the Lion Yard have been worked out as a basis for a definitive scheme it will have been possible to carry out planning and transportation studies to cover the wider context.

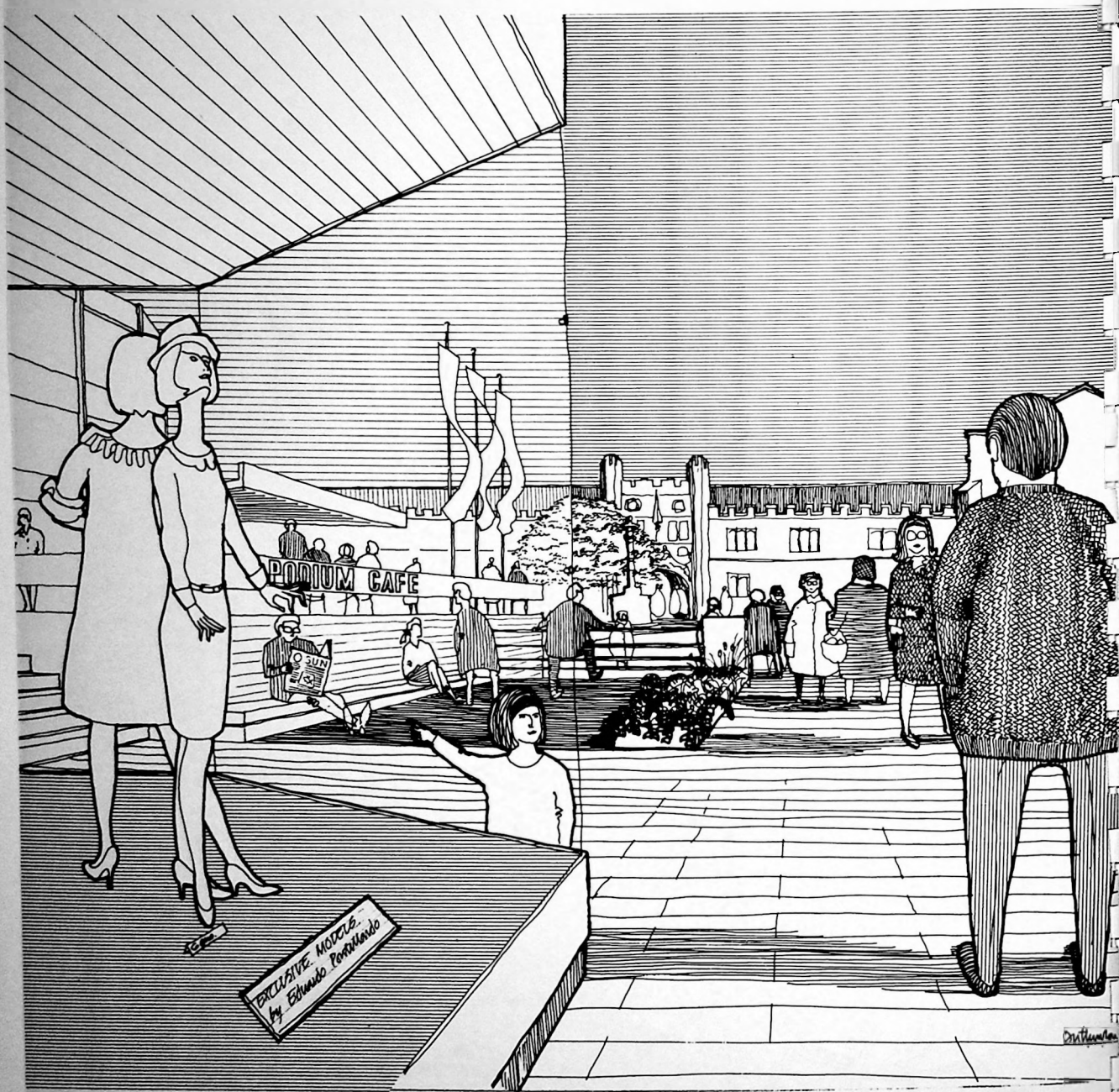


The old central shopping area in relation to the larger "Central Study Area" (shown dotted). The Lion Yard is shown in black.



The major areas of change in the central area:-

1. Lion Yard
2. King Street Area
3. New Museum Site
4. Addenbrookes Hospital Site
5. Area bounded by Newmarket Road, East Road, Parkside, Parker Street, Emmanuel Road

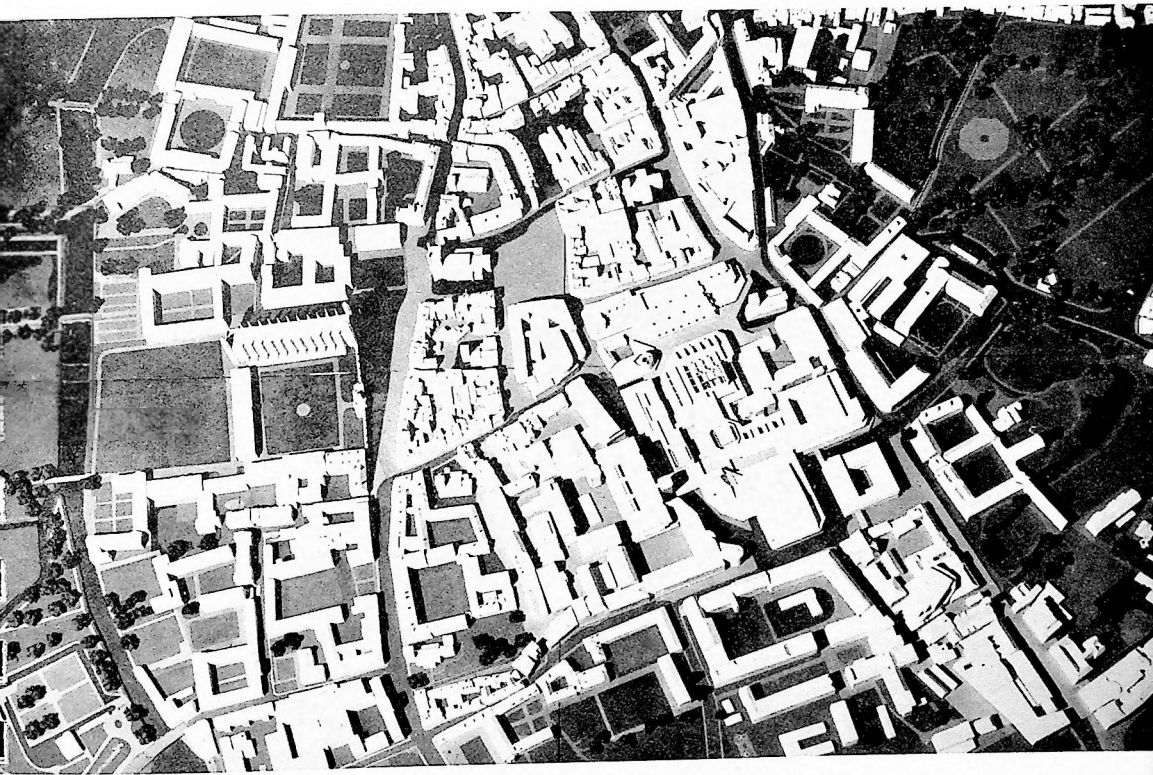


View of Christ's College Gateway

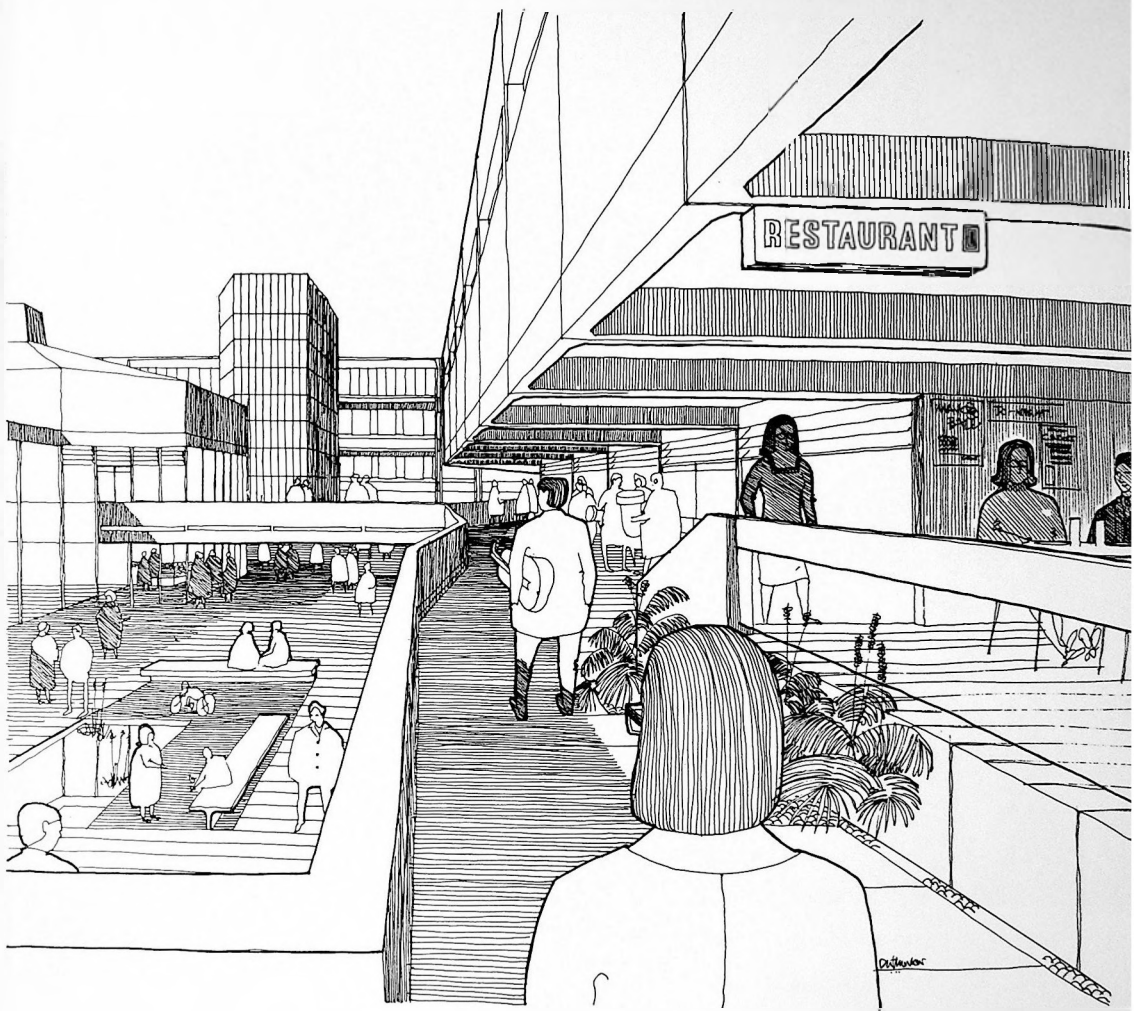
B Surroundings of the Lion Yard

- B 1 From the start it has been assumed that any successful scheme for the Lion Yard must grow organically out of its surroundings. Without in any way sacrificing the full potentialities of modern design and construction it must be designed to fit in with the spirit and character of Cambridge. We began this study, therefore, by examining the character of the existing centre.
- B 2 The Lion Yard lies at the edge of the mediaeval city with its winding and irregular street pattern. There are few long views and the major features such as King's College Chapel emerge dramatically and unexpectedly from many different viewpoints. Open spaces are irregular in shape and widely varying in size and character.
- B 3 This basic ground pattern gives the possibility of street pictures of great interest and variety. We have therefore felt it desirable in the Lion Yard to aim at irregular ground patterns following the natural flows of pedestrian movements, giving great variety of open spaces and including sites capable of being developed by buildings not only good in themselves but capable of combining to form successful urban groups.
- B 4 It is no use following the spirit of the ground pattern if the third dimension is discordant. In Cambridge there exists a very wide variety of scales and even in the area immediately round the Lion Yard there is a range from the almost domestic scale of Christ's College and Emmanuel College to the much larger scale of the laboratories on the New Museum Site.
- B 5 The over-large scale of modern shopfronts in Cambridge has been criticised and a principal aim in the shopping area of the Lion Yard must be to combine the adequate display of goods with a general character and scale more in harmony with older buildings. This we have tried to indicate in the general plan form and the perspectives.

- B 6 Of the other elements in the scheme the only one where problems of scale may arise is the Concert Hall. A public hall to seat something of the order of 1,500 people is necessarily a bulky object. One of the advantages of the Lion Yard as a setting for the Concert Hall is that it is one of the few places in Cambridge where its bulk can be masked by other buildings.
- B 7 Much of the architectural interest of Cambridge comes from the wide variety of architectural styles and the way in which the individual personalities of the buildings combine to form successful groups. One of the lessons of the past seems to be that, given architects of ability using materials which are neighbourly, there is virtually no limit to the diversities of architectural style which can successfully be combined.
- B 8 With this in mind it is clear that one of the problems in the design of individual buildings in the Lion Yard will be not only to secure a high level of architectural design but also to ensure that great variety and interest of treatment are combined with an overall unity of conception.
- B 9 There is the possibility of a number of visual links with the surrounding area. These can be distant views such as those towards King's College Chapel, the tower of St. John's College Chapel, the steeple of All Saints' Church in Jesus Lane or links with nearby buildings such as the fronts of Christ's College and Emmanuel College and the Church of St. Andrew the Great. We have taken these into account in the visual grouping of the Lion Yard so as to make the new development flow naturally with the old.
- B10 At present most shoppers visiting the central area appear to include in their route the circuit of Sidney Street, Market Street, Market Hill and Petty Cury which contains the majority of the larger shops. It is hoped that the form of the layout shown would encourage them to walk through the new Lion Yard and the new Upper Yard on their way to the new centre proposed by the Minister.



Aerial View of Model



View of New Science Building (New Museum Site)
from Upper Lion Yard

C How the scheme evolved

- C 1 The preliminary scheme which is illustrated in this report has been evolved through a fairly long process of trial and error during which a number of other schemes and variations have been tried and discarded.
- C 2 The problem was found to be one of considerable complexity due partly to the variety of building types which it included; partly to the difficulty of arranging for the separate circulation of large numbers of people, motor cars and goods vehicles on a relatively restricted site; and partly to the cramped shape of the site and the intrusion into it of Fisher House, the Church of St. Andrew the Great and the Post Office buildings.

VARIETY OF BUILDINGS TO BE INCLUDED

- C 3 It has been generally agreed that the Lion Yard was not to be thought of merely as a shopping area but that a substantial element of cultural and university building should be included as well as an hotel and car park for 750 cars.
- C 4 We found it possible to include all the cultural buildings for which there seemed to be a demand. On the question of university buildings the University Estate Management Advisory Service suggested that the immediate needs of the University were being met on the New Museums Site. They felt that it was not possible at present to say what, if any, space the University might want. The Music School, if it had to be moved, would be a possibility and there had been discussions about the possibility of a science library and other uses. A great deal would depend, however, on factors such as the actual date of development and whether the University would have money available for particular purposes at the required time.
- C 5 The new science buildings on the New Museums Site are now being designed by Mr. Philip Dowson of Arup Associates in a form which should integrate well with the proposals shown in this report.

TRAFFIC CIRCULATION

- C 6 The main flows of pedestrians which will occur between the existing and new centre have dictated the general form of development and led logically to the positions and orientations of the two pedestrian yards shown in the scheme. One would be parallel to Petty Cury and pointing to the Church of St. Andrew the Great this being linked to an Upper Yard by a pedestrian way going south towards the Concert Hall and then turning east towards Emmanuel Street.
- C 7 Virtually the whole of the pedestrian centre of the site is raised about twelve feet above street level, the space below being used for car parking and servicing. The Petty Cury shopping frontage has been designed to draw people up through the shops on to the upper level, and there will be similarly contrived access from other directions. It will be necessary to use escalators in key positions as well as lifts to upper storeys. The problem of prams and bicycles must not be forgotten and there will be gentle ramps in a few key positions.

- C 8 The circulation for cars and goods vehicles was more difficult to solve. The only way of gaining access for the massive flow of private cars to and from the car park which would occur at peak periods was to feed them in from the southern end of the site. The alternative approach from Bene't Street would have involved extensive widenings which would not have been generally acceptable.
- C 9 Many ways of arranging this and of separating the flow of goods vehicles were tried and finally the layout shown was adopted. The number of goods vehicles visiting the site was bound to be only a very small fraction of the number of motor cars, and it was felt that there could be no serious objection to entry from the north. They would then stop at the central goods depot and leave at the southern end of the site. Goods would be transferred by underground trolley-ways from the central goods depot to individual buildings. Buildings at the south-eastern corner of the site, including the hotel and department store, could have separate goods access.

CRAMPED SHAPE OF SITE

- C10 The site is not only rather restricted in area but it suffers from the major intrusion into it of Fisher House, the Church of St. Andrew the Great and - most serious of all - the Post Office buildings. Enquiries were made at a very early stage into the possibility of moving these three buildings, but it was clear that for various reasons this was unlikely to happen.
- C11 In the outcome, Fisher House and the Church of St. Andrew the Great help rather than hinder the scheme by adding interest and variety. The Post Office buildings, however, remain a major problem in a number of ways and further discussion will be necessary to see how these can be overcome.

THE OVERALL CONCEPT

- C12 In preparing the scheme it was felt that the Lion Yard must be designed to serve a world of rising standards of affluence and leisure. Not only will the population served be larger and more mobile, but it will have greater and more varied needs. The graduate side of the University will be larger and the importance of Cambridge as a centre for a variety of activities is bound to grow.
- C13 With this kind of forward projection of Cambridge of the future in our minds we have tried to picture the kind of lively centre that will be needed. It should be an informal, friendly place where one can stroll around, peer into shop windows, chat with ones friends, lounge in pubs or sit in the sun. A place which is shielded from the noise and fumes of traffic but full of the chatter of people. There would be trees, flowers and perhaps a fountain and an occasional piece of sculpture. Restaurants and cafes in and out of doors. Gaiety and variety but not garishness or ostentation. It must be an exciting place to go to, a place where one can see and hear the best of music, drama and ballet: where the local societies can present their performances or exhibitions; a centre for painting, sculpture and all the visual arts; a place for conferences and lectures; for borrowing, browsing and buying books.

C14 To achieve this kind of setting it is necessary to associate the various buildings far more intimately than has been normal in the past. The Central Library must be among the shops; the Concert Hall and the other arts buildings must be close to each other, even sharing some of their amenities such as restaurants, bars and circulation space; the pedestrian areas must flow easily from one building to another.

C15 We felt it would also be advisable to aim at flexibility of use wherever possible. Fashions change and a centre of this kind must follow the fashions if it is to stay alive. With modern methods of structure and cladding it is possible to provide some degree of flexibility of structure. Walls and partitions can be moved around and spaces remodelled to provide for new and unforeseen uses. We are aiming at a scheme capable of accommodating many variations of content without losing its essential character and practicality.

C16 A concept of this kind can only emerge gradually as the scheme develops and as more and more people join in to think out its possibilities, but perhaps enough has been said to indicate the general flavour of what is being attempted. It must be stressed that what is presented in this report is only a preliminary sketch. Although we are satisfied that a practical scheme can evolve from it much detailed work is necessary, not only on the scheme as a whole but on its constituent parts.

'TRAFFIC ARCHITECTURE'

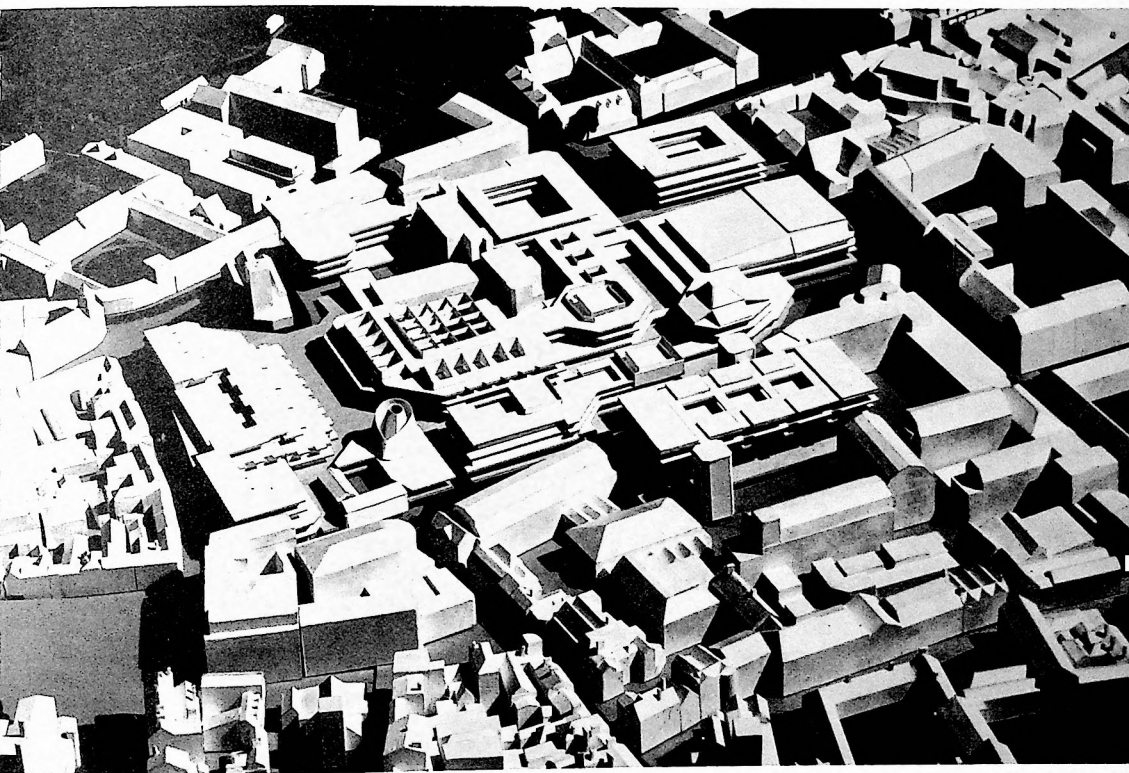
C17 It seemed clear that the best way of releasing the full potentialities of the site would be by grouping the building elements together on top of each other and of the car park and approach roads. The possibilities of this kind of structure, which Professor Buchanan has called 'traffic architecture', have only recently been realised although the advances of constructional techniques made it possible some time ago.

C18 The advantages include the following:

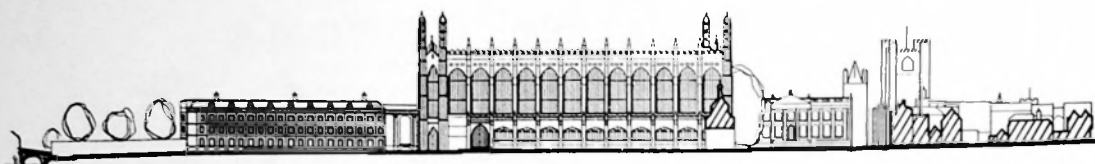
- a. parking of motor vehicles can be dealt with economically and efficiently for the whole site;
- b. lorries and vans can load and unload off the street, under cover and out of sight;
- c. services for all buildings can be accommodated in easily accessible ducts and there is no need to tear up the pavement whenever any particular service needs augmenting;
- d. the users of the building are completely isolated from the noise, fumes and danger of motor traffic;
- e. better daylighting and sunlighting can be provided by inter-relating the individual buildings;
- f. buildings can be sited to take advantage of particular viewpoints or situations;
- g. buildings can share many of the amenities of the whole area. For example, one can stroll from the Music School or Arts Centre across the Upper Yard to a restaurant or cafe, do ones shopping, borrow books from the library, visit a friend's flat - all without moving ones car from the central car park;

- h. the close relationship of the different buildings should encourage their greater use. The idea of 'impulse shopping' can in this way be turned to impulse concert-going or exhibition-gazing.

C19 These advantages bring with them their own special problems, including those of administration, construction, fire-fighting and policing. These in their turn may well involve additional expense. Fortunately a considerable body of experience is now becoming available as a result of experience in other towns. There is no reason to fear that any of the problems will be insoluble or even unduly difficult provided there exists a willingness from all concerned to abandon 'red tape' and concentrate on solving actual problems rather than paper ones.



View of Model from West



Section looking north running from Kings College through the New Museums site to the Lion Yard. This shows the comparatively modest scale of the proposals for the Lion Yard compared to the existing buildings in the centre.

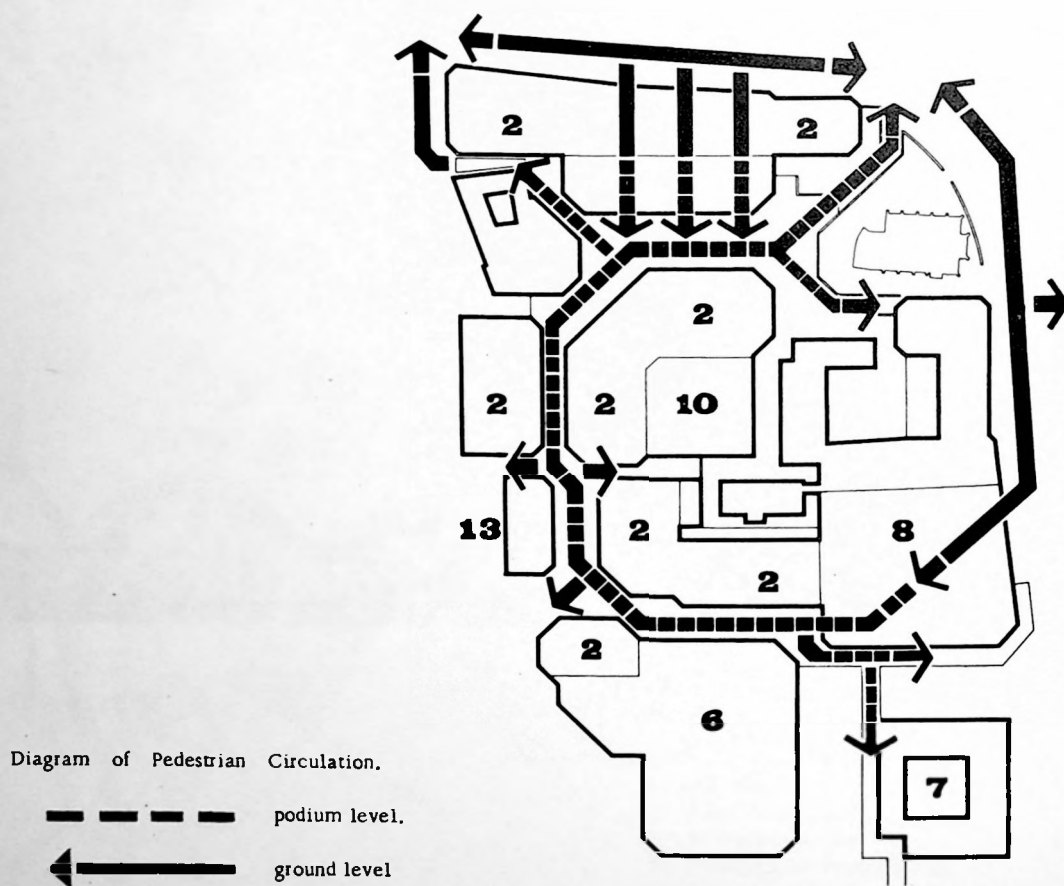
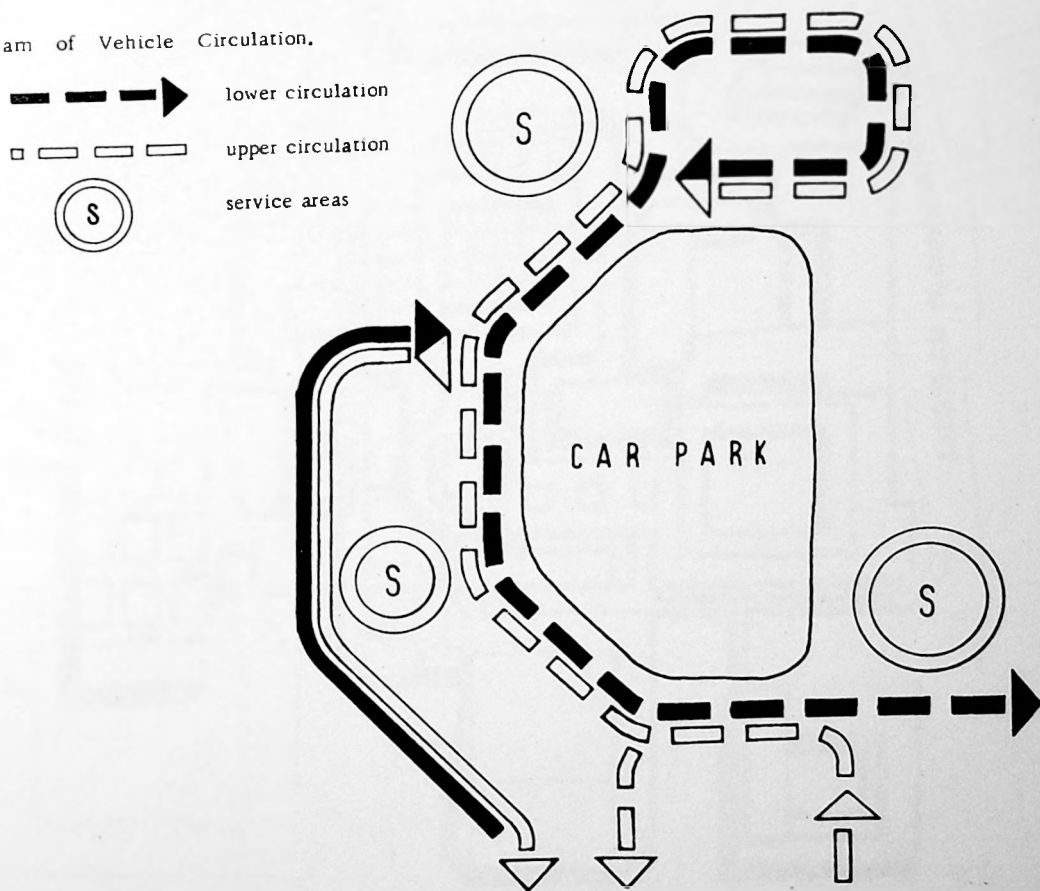




Diagram of Vehicle Circulation.



D Description of proposals

Plans of most floors and two cross sections through the whole site are shown in the following pages. In reading these it should be remembered that these drawings and the perspectives are intended to give only a general indication of the form of the different buildings and their relationship to each other.

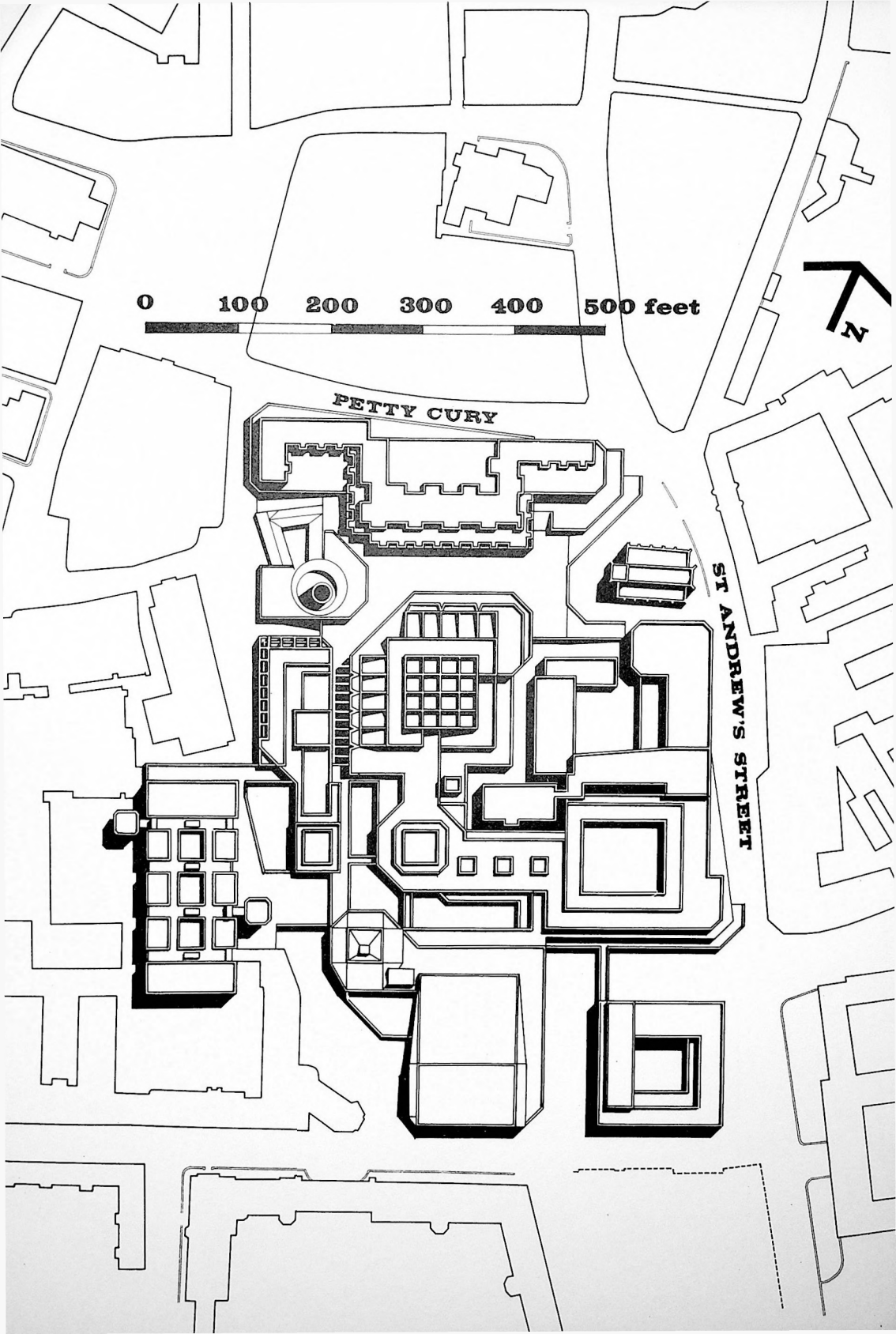
ROOF PLAN

0 100 200 300 400 500 feet



PETTY CURY

ST ANDREW'S STREET



This plan shows the layout at the lowest level providing car parking one floor below ground level. A service area provides goods access to the northern end of the development.

LOWER PARKING LEVEL

reference

- | | | | |
|---|----------------------|----|-----------------------|
| 1 | St. Andrew's Church | 7 | Hotel |
| 2 | Shops | 8 | Department Store |
| 3 | Guildhall | 9 | Post Office Buildings |
| 4 | New Science Building | 11 | Fisher House |
| 6 | Large Hall | 16 | Car Park |
| | | 17 | Service Area |

0 100 200 300 400 500 feet

PETTY CURY

ST ANDREW'S STREET

DOWNING STREET

3

2

11

17

16

9

8

4

6

7

This plan shows the layout at or near existing street level, and the various ways of approaching the New Lion Yard and Upper Yard.

The band of shops along the south side of Petty Cury would have frontages both to Petty Cury and the New Lion Yard and the two levels would be connected by stairs and escalators.

At the south east corner there would be a similar approach through a reconstructed Sayle's Departmental Store. Other important entries to the Yard would be from the car parks below; from the New Museum site to the west; from Bene't Street and from St. Andrew's Church.

The principal goods entrance for the main groups of shops is from Corn Exchange Street and there are other goods docks serving Sayle's and the hotel and Concert Hall.

The car park approached from Corn Exchange Street extends on two levels under most of the upper pedestrian level.

GROUND LEVEL

reference

- | | |
|------------------------|-------------------------|
| 1 St. Andrew's Church | 8 Department Store |
| 2 Shops | 9 Post Office Buildings |
| 3 Guildhall | 11 Fisher House |
| 4 New Science Building | 16 Car Park |
| 6 Large Hall | 17 Service Area |
| 7 Hotel | 18 Offices |

0 100 200 300 400 500 feet



PETTY CURY

3

2

11

17

1

ST ANDREW'S STREET

16

9

2

17

4

8

17

6

7/18

DOWNING STREET

This plan shows the layout at the main upper pedestrian level at a point approximately twelve feet above street level. The extent of the paved pedestrian area is shown hatched. It extends across the present line of Corn Exchange Street so that there will be uninterrupted pedestrian access across the whole of the Lion Yard and New Museum site. The new science buildings are being planned "on stilts" with a great deal of free space underneath.

This podium level is the principal floor of the whole development and whilst giving continuity of shopping frontage provides access to the central library and other buildings grouped at the level above in the Upper Yard. It will be possible to walk in a minute or two to any one of these buildings in an environment as completely shielded from traffic as any of the college courts.

PODIUM LEVEL

reference

- | | |
|-------------------------|-------------------------|
| 1 St. Andrew's Church | 8 Department Store |
| 2 Shops | 9 Post Office Buildings |
| 3 Guildhall | 10 Library |
| 4 New Science Buildings | 11 Fisher House |
| 6 Large Hall | 13 Arts Centre |
| 7 Hotel | 18 Offices |

0 100 200 300 400 500 feet



PETTY CURY

ST ANDREW'S STREET

DOWNING STREET

3

2

11

1

2

18

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7

At this level there is an extensive system of public spaces such as the foyers to the concert hall and small hall, the arts centre and the concert hall restaurant linked by public galleries to other buildings outside the arts group such as the central library and the Y.M.C.A.

PODIUM PLUS ONE

reference

- | | |
|------------------------|-------------------------|
| 1 St. Andrew's Church | 9 Post Office Buildings |
| 2 Shops | 10 Library |
| 3 Guildhall | 11 Fisher House |
| 4 New Science Building | 12 Y.M.C.A. |
| 5 Small Hall | 13 Arts Centre |
| 6 Large Hall | 14 Music School |
| 7 Hotel | 18 Offices |
| | 19 Residential Flats |

0 100 200 300 400 500 feet

PETTY CURY

ST ANDREW'S STREET

DOWNING STREET

3

11

12

13

4

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14

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18

18

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2

At this level the buildings become separated from one another giving views across an interesting roofscape of both the new development and existing Cambridge. The uses include the upper areas of public buildings together with offices and residential accommodation.

PODIUM PLUS TWO

reference

- | | |
|-------------------------|-------------------------|
| 1 St. Andrew's Church | 10 Library |
| 3 Guildhall | 11 Fisher House |
| 4 New Science Building | 12 Y.M.C.A. |
| 5 Small Hall | 13 Arts Centre |
| 6 Large Hall | 14 Music School |
| 7 Hotel | 15 International Centre |
| 9 Post Office Buildings | 18 Offices |
| | 19 Residential Flats |

0 100 200 300 400 500 feet



PETTY CURY

ST ANDREW'S STREET

DOWNING STREET

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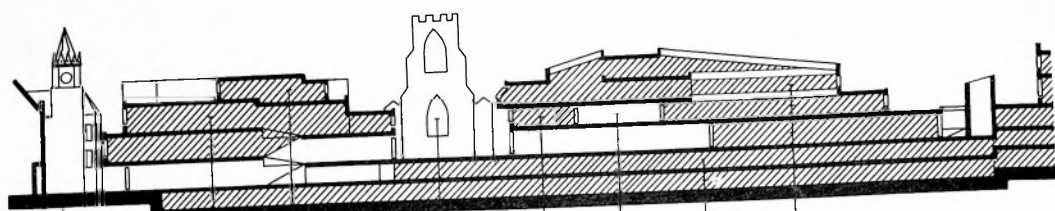
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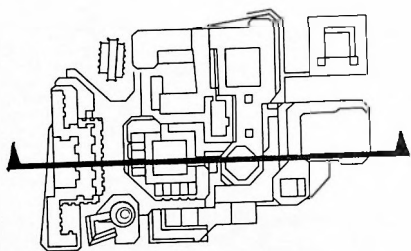
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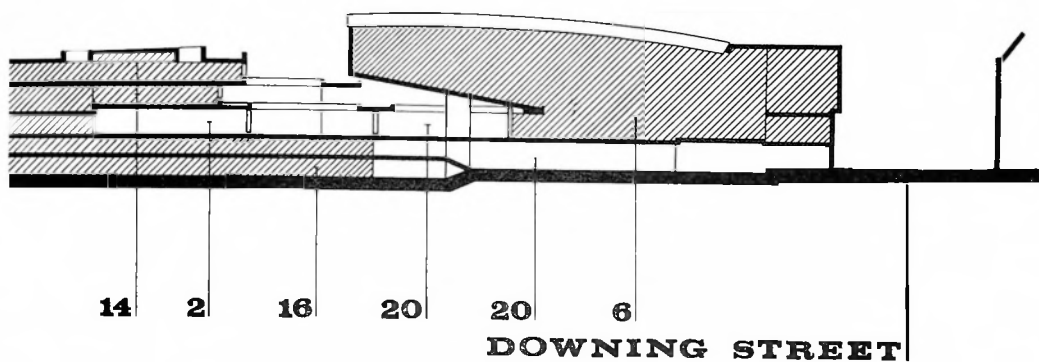
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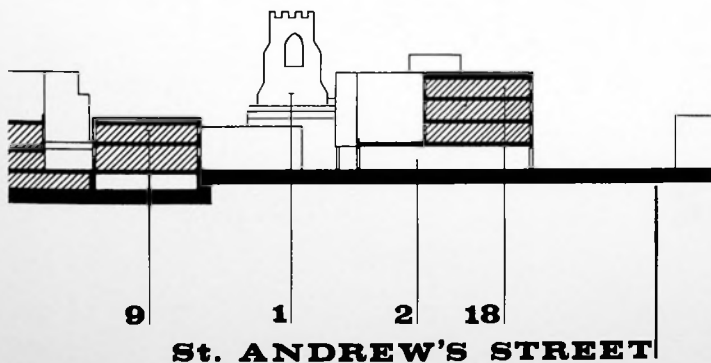
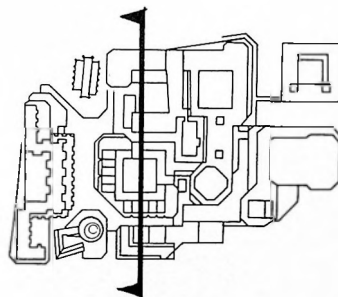


2 12 2 10 16
CORN EXCHANGE STREET

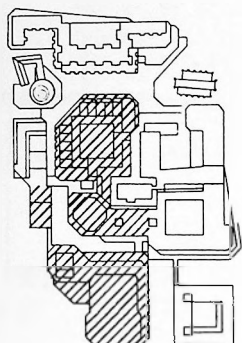


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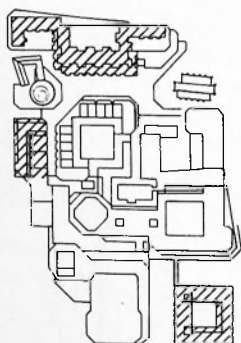
- | | |
|-------------------------|-----------------------|
| 1. St. Andrew's Church | 12. Y. M. C. A. |
| 2. Shops | 14. Music School |
| 6. Large Hall | 16. Car Park |
| 9. Post Office Building | 18. Offices |
| 10. Library | 19. Residential |
| | 20. Large Hall, Foyer |



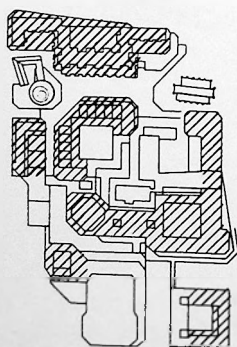
Distribution of Main Public Uses.



Public



Residential



Commercial

E Capacity of the Lion Yard

- E 1 One of the principal objects of this study was to determine the amount and type of building use which could be accommodated within the area.
- E 2 The following tables give some figures of the floor space proposed in the scheme for different purposes, and compare these with the floor spaces as shown by the 1961 Survey (Appendix D of the Report by the County Planning Department on Comprehensive Development Area Map No. 4).
- E 3 As has been made clear elsewhere in this report both the scheme and the figures derived from it are preliminary only. Substantial variations may occur at later stages. The general balance between the three main types of use, public, residential and commercial however should be maintained in the final scheme.
- E 4 The total site area excluding St. Andrews Church but including half the surrounding roads is approximately 412,743 square feet. This gives a floor space index of 1.68 excluding the car park, goods depot and covered approach roads. The general distribution of public buildings and residential and commercial uses is shown in the diagram opposite.
- E 5 In arriving at this distribution regard has been paid to all aspects of the problem including ease of access and the desirability of ensuring the best financial return consistent with good planning. Further consultations will be necessary on these and other aspects of the proposals.

	sq. ft.	sq. ft.	%
A. EXISTING BUILDINGS			
Fisher House	10,158		
G.P.O. Buildings	<u>64,824</u>	74,982	11.25%
B. PUBLIC BUILDINGS			
Concert Hall, Small Hall and Foyers	80,000		
City Library	51,000		
Arts Centre	12,000		
University Music School	18,000		
International Centre	5,000		
Y.M.C.A.	<u>20,000</u>	186,000	28.00%
C. RESIDENTIAL			
Hotel (100 double bedrooms)	45,000		
Flats	<u>30,000</u>	75,000	11.25%
D. COMMERCIAL			
Shops 204,000 existing occupied			
8,000 existing vacant			
30,000 additional	242,000		
Public Houses	8,000		
Offices replacement of existing	<u>80,000</u>	330,000	49.50%
GRAND TOTAL		665,982	

TABLE 1

SUMMARY OF FLOOR SPACE INCLUDED IN SCHEME

(figures of proposed uses taken to the nearest thousand square feet)

	Existing	Proposed	Plus	Minus
1 SHOPPING	204,267	234,267	30,000	-
2 PUBLIC HOUSES	8,236	8,236	-	-
3 OFFICES	79,601	79,601	-	-
4 G.P.O.	64,824	64,824	-	-
5 CHURCH	6,056	6,056	-	-
6 CLUBS & SOCIETIES	56,127	37,000	-	19,127
7 UNIVERSITY	4,059	18,000	13,941	-
8 RESIDENTIAL	95,614	75,000	-	20,614
9 INDUSTRIAL	7,794	-	-	7,794
10 VACANT	41,690	-	-	41,690
PUBLIC BUILDINGS	-	131,000	131,000	-

TABLE 2

COMPARISON OF EXISTING AND PROPOSED USES

(The order of items is the same as in Appendix D of the Report by the County Planning Department on Comprehensive Development Area Map No.4)

The above figures show the general results of redevelopment. The original figures in Appendix D were given to the nearest square foot and this has been followed in the column of proposed uses. It is obvious that in practice appreciable variations will occur. Some small change is expected in the G.P.O. buildings but this is not shown. In Clubs & Societies only the Arts Centre, International Centre and Y.M.C.A. have been included, resulting in a decrease of 19,127. In practice other clubs and societies may be accommodated and there may be no decrease.

F Description of buildings

THE CONCERT HALL

- F 1 This would be sponsored by the City Corporation and the University. It is understood that the primary intention is to provide a hall of first rate musical quality for an audience of up to 1,500. In addition the University has expressed a wish that it should be capable of housing conferences and examinations. The first use presents acoustical problems, in all probability not insurmountable. Use for examinations of the whole of the hall implies a flat floor which would make it difficult to provide adequate sight lines.
- F 2 Other suggested uses of the hall also have their problems. Dances and receptions also need a flat floor. Use for theatre and opera would ideally call for a proscenium arch and flown scenery but this is ruled out on account of cost and the near impossibility of providing first rate musical quality. It would, however, be possible to provide an apron stage with full theatrical lighting without in any way detracting from musical quality.
- F 3 It will not be possible to produce a detailed scheme for the hall until these and other problems have been discussed in detail. The shape shown on the drawings indicates a concert hall which, in addition to its primary use for music, would also be suitable for apron stage theatre and opera and also for conferences. Extensive foyer space is shown. Apart from making it possible to walk around in comfort during the intervals this would be useful for exhibitions and might also be used on special occasions as overspill space to seat an additional audience. It might also go a long way to meet the University's need for examination space.
- F.4 These comments may well be modified in the light of later studies. The decision to suggest the siting of the Concert Hall in this position in the Lion Yard was taken because it was felt that the Concert Hall was the key to the whole success of the redevelopment. Although other positions in the City may be easier and cheaper to build on and although they might be easier to reach, they lack the dramatic tension of a central site. A decision to build the Concert Hall away from the Lion Yard would reduce the dynamic of the whole area.

SMALL HALL

- F 5 Many events would be unsuitable for the main Concert Hall. Music recitals, exhibitions, rehearsals, 'theatre in the round', lectures and in general any event attracting smaller audiences would be better housed in a small hall, provided this can be sited in a position which makes it quite independent of the main hall. The small hall should be sufficiently near to the main hall for it to be used together with it on occasion, but it should be acoustically isolated so that both halls can be used simultaneously. The hall might have a flat floor with moveable tiered seating on all four sides. The number of seats would be between 300 and 400.

CENTRAL LIBRARY

- F 6 This will be sponsored by the City Corporation, and as it is urgently needed a site has been chosen which has already been cleared and forms part of the present car park. All the normal facilities of a central library will be included. It will be possible to expand the present lending and reference sections and to provide a music and gramophone record library and an archive section. A certain amount of exhibition space can be provided within the circulation area.

ART GALLERY AND EXHIBITION SPACE

- F 7 A number of people in Cambridge have suggested that there is an urgent need for a small art gallery which could house a permanent exhibition of modern works and also provide space for travelling exhibitions. If this is accepted in principle there are several possible locations. It could initially form part of the Central Library and if found to be successful it could subsequently move to its own premises in a suitable position off the Upper Yard. Or it could initially be housed in or off the foyer space of the Concert Hall. It is understood, however, that serious security and insurance problems arise if valuable material is displayed in spaces open to the general public. Or it could be provided as part of the proposed Arts Centre. As a long-term solution this might well prove to be the best.

ARTS CENTRE

- F 8 This is a project which has been privately discussed among the various arts societies in Cambridge and with their permission I am summarising the proposals here. They propose that there should be established

"an Arts Centre providing space and modern facilities for individuals and members of professional and amateur groups to practise and enjoy music and the visual arts; a living centre where people do things themselves as well as hear and see what is going on in the rest of the world. For all who are interested in the Arts it would be a great benefit and a source of pleasure to the City and University".

- F 9 It is proposed that a non-profit-making Trust be established and administered by a board consisting of citizens of Cambridge including members of the University, and that a Committee be formed to advise on the form the Centre should take and the means of establishing it. The Centre would contain a small concert hall, practise rooms, a large art gallery and a number of art studios, together with a central cafe and a restaurant and administrative offices.

- F10 Ideally the promoters consider that the Centre should be on a riverside site and they envisage an inviting building

"with tables outside in the summer and open-air exhibitions of sculpture".

They would, however, be interested in joining in with a development of the Lion Yard of the kind described in this report. It will be clear that part of the facilities suggested for the Arts Centre have already been dealt with and it is possible that the Club facilities and studios might be arranged as a kind of semi-private annexe to the main arts group.

UNIVERSITY MUSIC SCHOOL

- F11 The Music School is at present housed in Downing Place but it may be necessary to move it as part of a comprehensive re-development of the surrounding area. If so a very suitable location would be off the Upper Yard next to the small hall. The main elements would include a library, lecture rooms of different sizes, offices for academic and administrative staff, practise and listening rooms. A very economical solution would be for the Music School to use the small hall for recitals and orchestral rehearsals and the Concert Hall for large-scale performances. There are obvious difficulties in administration, but if this dual use were found possible it would entail siting the Music School very close to the Concert Hall.

INTERNATIONAL CENTRE

- F12 This is an existing social club for foreign students, at present housed in premises in Trinity Street whose lease will shortly expire. The need is for normal club facilities - canteen, library, lounges and a lecture room. Dances could take place in the Concert Hall or small hall.

Y.M.C.A.

- F13 This is at present housed within the Lion Yard area and should be rebuilt as an integral part of the new development. Accommodation should include a sports hall, a chapel, a billiard room and table tennis room, lounge, cafeteria, dining room, kitchen and a bedroom wing.

HOTEL

- F14 It has been assumed in the past that an hotel would be provided as part of the Lion Yard development on the reasonable assumption that more hotel accommodation is needed in Cambridge. The site suggested would have the advantage of being extremely central, with good road access and be immediately adjacent to the central car park. It would be possible to provide for at least one hundred bedrooms and for very substantial restaurant and function areas, together with the necessary kitchens and servicing. If on further investigation it appears unlikely that a sponsor for an hotel will be forthcoming, this corner could be used for residential flats, possibly with public rooms and a restaurant for tenants and the general public.

RESIDENTIAL FLATS

- F15 There appears to be a substantial and growing demand for small flats at or near to the centre of Cambridge. If the Council wished, it would be possible to site a number of these in excellent positions at high levels overlooking the New Lion Yard

SHOPS

F16 The amount of shops shown in the scheme is in accordance with the Minister's recent decision. The general effect of replanning will be to move shopping space at present fronting St. Andrew's Street to pleasanter and safer positions in the New Lion Yard.

F17 Sayle's Department Store can be rebuilt in a position roughly the same as it occupies at present. It will in all probability be the largest single unit in the new development and it occupies a key position at the southern entrance to the pedestrian area. A central bank of escalators could lead through its sales area to the upper level.

OFFICES

F18 Any office space which is demolished in the cause of redevelopment should be replaced in suitable positions. In most cases these will be at upper levels over shops in the New Lion Yard or off the Upper Yard. Other needs for central area offices could be accommodated in the extension to the central area.

CENTRAL CONVENIENCE

F19 It is hoped that a well equipped and supervised central convenience can be provided in a central position off the New Lion Yard.

CAR PARK

F20 Parking space for 750 cars has been included in a position which is out of sight but immediately adjacent to the whole development.

CENTRAL GOODS DOCK

F21 Unloading bays and waiting space have been provided for the maximum number of lorries and vans likely to visit the Lion Yard area at any one time. Surveys in the remainder of the central area have been made to determine the number likely to be needed. Goods from the loading bays will be moved to individual buildings through underground ways, either by loading on to trolleys or by some type of automated system.

G Steps in implementing the scheme

- G 1 Broadly speaking there are four principal stages in the implementation of a major central area redevelopment like the Lion Yard area.

THE DECISION TO REDEVELOP THE AREA AS A UNIFIED WHOLE

- G 2 This is given legal form by its definition as an area of comprehensive development and by its designation for compulsory purchase. From the date when this was originally submitted to the Minister, to his recent letter signifying approval, this stage has taken five years. It should be noted that it will still be necessary to make compulsory purchase orders and have these confirmed by the Minister before any land can be acquired compulsorily. These processes and the actual acquisition are unlikely to be completed under two years, even for the land most urgently needed.

THE CHOICE OF BUILDING ELEMENTS TO BE INCLUDED IN THE REDEVELOPMENT

- G 3 Although this has been settled in broad terms by the list of uses in the Written Statement(1) and the Minister's decision on the amount of shopping and offices that may be included(2), the Council has not yet considered what the non-commercial

-
- (1) The total amount of shopping floor space will not exceed that existing at 22 February 1962 plus 30,000 sq.ft. Other uses including small groups of offices ancillary to the Central Area uses are intended on appropriate sites and these are set out in a Use Zone Table applicable to the Comprehensive Development Area No.4 and included in Schedule VI to the Written Statement.

- (2) Use Zone Table
Applicable to the Area Zoned for Central Area Uses in
Comprehensive Development Area No.4 (Lion Yard)

<u>Building Use Group</u>	<u>Central Area</u>
Dwelling Houses	P
Residential (other than dwelling houses)	P
Schools and Residential Colleges	P
Shops	P
Offices	
Wholesale Warehouses	X
Storage Warehouses	X
Public Buildings and Places of Assembly	P
Special Places of Assembly	X
Light Industrial Buildings	X
Industrial Buildings	X
Special Industrial Buildings	X
Car Parks	P

P = Permitted Use

X = Use Excluded

The term "Schools and Residential Colleges" is to be taken as including University Buildings and the term "Public Buildings and Places of Assembly" is to be taken as including a Masonic Hall.

part of the development should include. An early decision is essential if the work is not to be held up and a principal purpose of this report is to demonstrate the various possibilities. Most of these possible building elements will require investigation before it can be decided whether or not to include them, but it is important that the overall conception is seen and discussed as a whole from the very beginning of the operation.

THE PREPARATION OF AN OUTLINE LAYOUT OF THE WHOLE AREA

- G 4 This of course is dependent on the list of building elements to be included, but enough is known or guessed of the various possibilities for it to be a worthwhile exercise to produce the first sketch of an outline layout even at this early stage. The advantage of doing this is that discussion on its architectural and functional merits can proceed concurrently with investigations into commercial and financial factors, problems of structure, fire-fighting, policing, administration and the detailed planning of particular building elements. In this way the various operations can proceed in parallel with the minimum of delay and abortive work.
- G 5 It will be necessary for the outline layout to have the approval of the Royal Fine Art Commission, the County Council as planning authority and of the Minister, as well as being generally acceptable to the City Council and to public opinion in Cambridge. The second purpose of this report, therefore is to produce our preliminary conception of the form that the layout should take in order that as soon as possible an agreed layout can be produced.

BUILDING OPERATIONS

- G 6 Before any part of the scheme can be implemented the land must be available and the building must be sponsored by some organisation, either the City Council, the University or an outside body. The process of acquisition is a lengthy one and as soon as the Council is reasonably satisfied with the general form of the layout and has decided by what stages to proceed the process of acquisition should begin.
- G 7 It may be desirable, for practical reasons, to subdivide the area and deal with each part as a separate building operation. These operations, although separate, may be intimately inter-related. For example, the Central Library and other building elements may rest on top of the car park and the general service area.
- G 8 It will be necessary to construct the car park and service area in stages as soon as decisions can be reached on the precise form of the lower decks and the general form of the building elements above. It will not be necessary to have reached final conclusions on the upper deck buildings as the car park and service areas can be designed and constructed in a form which will allow considerable variation of structure above, although at some extra expense.
- G 9 The layout has been devised with the probable programme of events in mind. Early projects such as the car park and the Central Library have been placed in positions where the land

will be available at an early stage. Later or more uncertain projects have been placed on the perimeter of the site where prolonged uncertainty would not affect the implementation of the main work.

- G10 A further purpose of this report, therefore, is to enable steps to implement particular proposals to be taken as soon as possible. It must be stressed, however, that this report is only a preliminary one. It will not be possible for the Planning Committee and the Council to do more than receive it and comment on it.
- G11 The scheme now shown is a modification of an earlier version presented to the Planning Committee in November 1964. On the instructions of the Planning Committee further work was done by a team with representatives from the City Treasurer, the Estates Consultant, the Consultant Quantity Surveyor, and my department with the object of enhancing the commercial value of the development, minimising its cost of construction; improving the functioning of the scheme and improving its architectural potentialities.
- G12 The main changes made were the extension of the area of public circulation above ground level, which made it possible to place most of the shops on one level and enabled parking to be accommodated on two floors instead of three with a saving in site excavation and increased accessibility to the car park; a rearrangement of the shopping space to give larger and deeper shops, the provision of more continuous shopping frontages and a great variety of types of shop; the opening up of the pedestrian circulation from Petty Cury so that shoppers would be able to pass up through the shops on to the upper pedestrian level; a rearrangement of loading docks serving the area and the improvement of service access to the various elements; and a more intimate grouping of the cultural buildings round the Upper Yard.
- G13 At the same time further consideration was given to the architectural grouping of the scheme as a whole although no attempt was made to produce detailed sketch plans of any of the buildings, as it was felt that this would result in wasted effort if it were done before the scheme had won a measure of acceptance and had been proved to be financially viable.
- G14 These changes have resulted in an estimated reduction of the net additional annual burden on the rates from £265,000 to £157,000 which represents a rate of approximately 6.3d in the £.
- G15 The estimates cover the total cost to the City Corporation of acquiring the site; the erection of buildings, professional fees, interest and other normal development outgoings; and the cost of operating those buildings, such as the Concert Hall and Central Library, which are the responsibility of the City. In general the estimates allow for the whole additional burden which might reasonably be expected, for whatever reason, to fall on the Council.
- G16 The City Treasurer points out that the actual "burden will vary according to the timing of the various parts of the construction and may be more or less according

to circumstances. Moreover, it may be that by phasing the construction of various parts of the scheme which can be proceeded with separately, the Council may be able to defer the date at which the full deficiency on the scheme has to be incurred." It will in any case be desirable to undertake the development by easy stages in order to avoid dislocation over a wide area. It may be possible to start the first stage without much demolition and complete this for occupation before demolishing for the second stage. This would avoid dislocation of trade.

- G17 If the proposals secure general acceptance the next stage will be to prepare sketch plans for those parts of the scheme where early progress can be made, and at the same time to explore the problems of site acquisition and method of development.
- G18 Concurrently with this the inter-professional team of officers from the City, County and University and outside consultants will be finalising their proposals for the Central Area as a whole so that in due course the proposals for the Lion Yard can be formally submitted for approval to the Minister in the context of a plan for the whole Central Area.

H Conclusions

- H.1 This study shows that it is possible to provide within the Lion Yard Area an integrated group of buildings capable of housing a complete range of central area activities. It is possible to include shopping and offices in accordance with the Minister's decision, together with a Concert Hall and Small Hall, a Central Library, an Arts Centre, an hotel, residential flats and a wide range of semi-public buildings.
- H.2 It shows that this can be done in a way which completely shields pedestrians from motor transport and which fits in with the existing scale and character of Cambridge.
- H.3 It gives an estimate of the total cost to the ratepayers of carrying out the scheme and subsequently maintaining it in working order.
- H.4 It describes some of the further steps which are necessary to implement the proposals in the context of a plan for the whole of the central area of Cambridge served by a transportation plan for the whole of the City and its surroundings.

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The work of the Lion Yard has been a team effort involving the following:

County Planning Department
Town Clerk's Department
City Treasurer's Department
City Surveyor's Department
City Architect's Department
Gerald Eve and Co., Estates Surveyors to the
City Corporation and the County Council (Mr. G. Powell)
Davis, Belfield and Everest, Consultant Quantity
Surveyors to the City Corporation (Mr. V. Bugg)

In the Department of Architecture and Planning the following are chiefly responsible:

Maurice M. Masterman in charge of the Civic Design Team.
Michael H. Wakelin in charge of the Lion Yard project
assisted by Miss F.M.C. Taylor, G.R. Rushman, R.G. Leach
planning officers, R.A. Graves, J.A. Barrow architects,
T.F. Jordan and A.I. Merry

The perspectives were drawn by D.G. Thurlow.

CW/GD

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View of St. Andrew's Church from ground level

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